

small organizations (84.0%,  $n=3,243,961$ ). Regression analyses indicated that increased expenditures were associated with large organizations ( $\exp(b)=2.00$ ,  $p=0.025$ ) and prostate cancer ( $\exp(b)=1.88$ ,  $p=0.039$ ). Increased disability days were associated with melanoma ( $\exp(b)=3.57$ ,  $p=0.039$ ) and cancer of the uterus ( $\exp(b)=4.90$ ,  $p=0.006$ ). Higher resource utilization was associated with breast cancer ( $\exp(b)=1.76$ ,  $p=0.011$ ) and cancer of the uterus ( $\exp(b)=1.85$ ,  $p=0.025$ ). **CONCLUSIONS:** Cancer is associated with a substantial burden in the workplace, as 3.86 million persons were diagnosed with new cases or had continued treatment while being employed in large or small organizations in 2007. Healthcare expenditures summed to \$59.3 billion, while 35.8 million total disability days were incurred.

#### PCN47 ACUTE LYMPHOCYTIC LEUKEMIA-RELATED INPATIENT CARE AMONG PEDIATRIC PATIENTS IN THE UNITED STATES

Mitra D, Candrilli SD

RTI Health Solutions, Research Triangle Park, NC, USA

**OBJECTIVES:** Acute lymphocytic leukemia (ALL) is most common in children. Due to advances in therapy options, the number of long term survivors of pediatric ALL continues to increase. However, although prognosis has improved significantly over time, ALL likely continues to impose a significant economic burden on society. This study sought to assess recent trends in pediatric ALL hospitalization and aspects of related care. **METHODS:** Data for pediatric (<20 years) hospitalizations with a primary diagnosis of ALL (ICD-9-CM codes 204.0x) from the 1997, 2000, 2003, and 2006 HCUP Kids' Inpatient Databases were analyzed. Weighted estimates of the number of hospitalizations for ALL and associated resource-based outcomes (i.e., total charges, length of stay [LOS], and stem cell transplant procedures) were derived. **RESULTS:** Between 1997 and 2006, the rate of pediatric ALL-related hospitalizations (per 100,000 2010 US pediatric population) increased slightly then leveled off, from 6.10/100,000 in 1997 to 6.61/100,000 in 2000, 6.60/100,000 in 2003, and 6.62/100,000 in 2006. Mean LOS remained consistent until an increase in 2006 (12.1 days in 1997, 12.4 days in 2000 and 2003, to 13.6 days in 2006). Similarly, the proportion of ALL hospitalizations with evidence of stem cell transplant remained roughly unchanged at ~60% until a sharp increase in 2006 to 64.9%. Finally, mean costs (2010 USD) for ALL-related stays have increased nearly 31%, from \$43,247 (1997) to \$56,517 (2006). **CONCLUSIONS:** We examined rates of pediatric ALL-related hospitalizations and documented aspects of inpatient ALL care, and observed a slight increase in the rate of hospitalizations over time. An increase in LOS was seen in 2006, with a commensurate increase in total costs, possibly owing to a marked increase in the rate of stem cell transplant. These findings may be used to support access strategies (e.g., economic modeling efforts) for current ALL therapies, as well as for those in the developmental stage.

#### PCN48 IMPACT ON HOSPITAL OUTPATIENT VISIT COSTS BY INITIATING PALONOSETRON VERSUS OTHER 5-HYDROXYTRYPTAMINE<sub>2</sub> RECEPTOR ANTAGONISTS FOR PREVENTION OF CHEMOTHERAPY INDUCED NAUSEA AND VOMITING (CINV) AMONG PATIENTS WITH CANCER

Craver C<sup>1</sup>, Gayle J<sup>1</sup>, Balu S<sup>2</sup>, Buchner D<sup>2</sup>

<sup>1</sup>Premier, Inc., Charlotte, NC, USA, <sup>2</sup>Eisai, Inc., Woodcliff Lake, NJ, USA

**OBJECTIVES:** To assess the average total daily CINV-related hospital outpatient visit cost (CINV-OC) among patients with cancer treated with any chemotherapy (CT) and initiated on anti-emetic prophylaxis with palonosetron versus other 5-HT<sub>3</sub> receptor antagonists (5-HT<sub>3</sub> RAs) in a hospital outpatient setting. **METHODS:** Patients with a cancer diagnosis initiating CT and palonosetron (Group 1) and other 5-HT<sub>3</sub>-RAs (Group 2) for the first time (index date) between April 1, 2007–March 31, 2009 were identified from the Premier Perspective database. Key inclusion criteria were patients aged  $\geq 18$  years and no nausea and/or vomiting and CT and anti-emetic medication use in the 6-month pre-index date period. A multivariate GLM model estimating the average daily CINV-OC in the follow up period (first of eight CT cycles or six months post-index date) was developed after adjusting for baseline differences in several demographic and clinical variables. **RESULTS:** Of 9,144 identified patients, 1,775 (19.4%) initiated palonosetron. Versus group 2 patients, group 1 patients were significantly younger [61.2 (SD: 13.0) vs. 62.8 (13.1) years;  $p<0.0001$ ], comprised more females [52.5% vs. 41.1%;  $p<0.0001$ ], less African American patients [8.6% vs. 13.2%;  $p<0.0001$ ] and more Hispanic patients [6.0% vs. 4.1%;  $p<0.0001$ ], and a lower percent of patients received LEC and MinEC combined (14.3% vs. 31.8%;  $p<0.0001$ ). In the follow-up period, unadjusted average daily CINV-OC among group 1 patients was significantly lower versus group 2 patients [\$1,047.9 (SD: \$1,444.5) vs. \$1,339.1 (SD: \$2,040.0);  $p=0.0014$ ]. After controlling for potential confounders, the regression model predicted a 12.0% decrease in the average CINV-OC;  $p=0.0076$  in favor of group 1 patients versus group 2 patients. **CONCLUSIONS:** In this retrospective hospital outpatient study, patients with cancer treated with CT and initiated on palonosetron anti-emetic prophylaxis were more likely to experience a significantly lower average daily CINV-OC versus those initiated with other 5-HT<sub>3</sub>-RAs.

#### PCN49 THE RELATIONSHIP OF AGE AND SEX WITH COST OF TREATMENT FOR CHRONIC LYMPHOCYTIC LEUKEMIA IN UKRAINE

Mandrik O, Zalis'ka O

Danylo Halytsky Lviv National Medical University, Lviv, Ukraine

**OBJECTIVES:** The major aims of the current research are to learn the average cost of treatment of Chronic lymphocytic leukemia (CLL) in Ukraine and examine factors that may be associated with it. The number of patients burdened by the dis-

ease in Ukraine is considerable and cost implications for individuals requiring care are significant. In Ukraine only limited amounts of necessary medicines are compensated by the government, with the major expenses covered by patients themselves. **METHODS:** A database containing records from hospital cards (2004–2010) for patients with CLL was analyzed retrospectively. The sample was composed of 113 patients, aged 39 to 85 (mean age 61.3, 61.9% males). Medicine costs related only to direct diagnosis were calculated. **RESULTS:** The average annual costs of pharmaceutical treatment for patient with relapse were \$1,561.16 (1\$=7.95 UAH on 12.01.2011). A negative correlation was found to exist between age of the patient's diagnosis and costs of treatment ( $r = -.218$ ;  $p < .05$ ). Furthermore, similar to past research in other countries male gender was associated with a significant increase in treatment costs,  $t(109)=1.95$ ,  $p=.05$ . **CONCLUSIONS:** Although other studies on CLL have shown a positive association between treatment cost and age, our research showed an opposite association for the sample studied in Ukraine. A possible explanation can be income limitations among the elderly that may restrict their ability to pay for medicines and, simultaneously, cause doctors to prescribe lower-priced pharmaceuticals. The average annual cost of treatment for CLL is higher than the minimum subsistence level, equal to \$1,320.75 for people of working age and \$1,107.92 for the retired population. To ensure effective treatment, especially for vulnerable populations, reimbursement for pharmaceuticals should be implemented.

#### PCN50 COST ANALYSIS OF DRG BASED FIRST LINE COLON CANCER THERAPIES IN HUNGARY

Valyi-Nagy I<sup>1</sup>, Jozsa G<sup>2</sup>

<sup>1</sup>Szt. Laszlo Korhaz, Budapest, Hungary, <sup>2</sup>University of Western Hungary, Sopron, Hungary

**OBJECTIVES:** In Hungary, costs of anti-cancer protocols are covered by hospitals' budget, and the funds of therapy expenditures provided by DRG accounts, on a "cycle-by-cycle" basis. Main goal of research was to investigate the cost of medicines of colon cancer chemotherapies and compare to DRG based remittance allocated by National Health Fund. **METHODS:** Cost analysis of CRC chemotherapy protocols has been conducted from the perspective of audited Oncology Centres. Regimens of 5-fluorouracil, raltitrexed, capecitabine, irinotecan, cetuximab, bevacizumab and oxaliplatin have been investigated, focusing on cost of medication, and DRG value of protocols. Research time horizon was January–June 2010. **RESULTS:** Real expenditures of protocols were assessed. The range of drug related costs were 3.1–3412.9 USD as expenditures of hospitals. Total expenditures of chemotherapy-regimens have been assessed and compared to allocation of remittances from National Health Fund Administration. The value of remittances have been found between 303.7 and 3261.8 USD, depending on protocols. The analysis of drug expenditures and remittances has resulted a wide range of gap: –178.0 to 1167.5 USD. The ratio of drug related expenditures and total remittance of hospitals showed diversity from 1.0% to 125.1%. **CONCLUSIONS:** As demonstrated by the analysis of costs, one of the reasons of the increase in expenditures spent on the therapy of metastatic colon cancer is the emerging of these new, expensive high efficiency therapies. Analysis shows, that fixed DRG values does not represent expenditure of chemotherapies of CRC treatment. Neither priority, nor incentive elements have been found in protocols, containing molecules with high efficacy or improved safety. Remittances should be validated regularly, based on hospitals' perspective.

#### PCN52 WILLINGNESS TO PAY AND COST BENEFIT ANALYSIS OF DELIVERY METHODS FOR DECISION SUPPORT FOR RURAL CANCER PATIENTS

Wilson LS<sup>1</sup>, Loucks A<sup>1</sup>, Franklin L<sup>1</sup>, O'Donnell S<sup>2</sup>, Moore D<sup>1</sup>, Jupiter C<sup>2</sup>, Kong S<sup>1</sup>, Yeung R<sup>1</sup>, Belkora J<sup>1</sup>

<sup>1</sup>University of California, San Francisco, San Francisco, CA, USA, <sup>2</sup>Cancer Resource Centers of Mendocino County, Mendocino, CA, USA

**OBJECTIVES:** Consultation planning (CP), a decision support service for patients provided by trained lay people, increases cancer patient's decision-self-efficacy (DSE) when conducted in-person. It may be more cost-beneficial to conduct CP by telephone. Compare DSE, costs, willingness-to-pay (WTP) and cost-benefit (CBA) of two CP delivery methods in rural breast cancer patients. **METHODS:** Randomly assigned clients from cancer resource centers were enrolled ( $n=67$ ). Interventions were CP in-person ( $n=32$ ) or by telephone ( $n=35$ ) between patients and trained resource center staff to discuss knowledge for informed care decisions at their next physician visit. Outcomes were DSE and WTP for services. 2009 costs of training, CP and patient time, travel, telephone, and center overhead were determined. We compared costs and WTP using t-tests, ranked-sum or Kolmogorov-Smirnov tests depending on Shapiro-Wilk tests for normality. CBA compared net benefit and CB ratios for delivery methods. **RESULTS:** As hypothesized, DSE did not differ between delivery methods (mean=3.44 in-person; 3.54 telephone) but each improved significantly ( $p<0.001$ ). Patients' WTP did not differ by method; telephone (\$154), in-person (\$144) ( $p=0.78$ ). Intervention costs were significantly lower for telephone than in-person (\$139 vs \$181,  $p<0.001$ ) due to higher patient travel for in-person (\$26 vs \$2,  $p<0.001$ ). Training costs were \$5.78–\$147/person depending on amortization volume. Net benefit for telephone over in-person is \$52; \$42 less cost, with \$10 more value. CB ratios when training (\$6.00–\$147/patient) and overhead (\$25/patient) are added to program costs are 0.41–0.68 for in-person and 0.49–0.90 for telephone depending on number delivered, so patients are WTP up to 68% of in-person and 90% of telephone costs; 22% more return-on-investment for telephone CP. **CONCLUSIONS:** Telephone delivery is more cost-beneficial than in-person CP. The value of CP is the same for either method and there are significant cost savings with telephone delivery. Adoption of CP by telephone could result in additional access for rural patients.